DOCUMENT RESUME

ED 459 613 FL 026 997

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TITLE	A Subject-Specific Glossary-Assisted Model. Integrated Online Resources for Chinese Students Taking Degree Courses in English.
SPONS AGENCY	Open Univ. of Hong Kong.
PUB DATE	2001-06-00
NOTE	68p.; Some text may not reproduce adequately.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	College Students; Computer Uses in Education; *English (Second Language); Foreign Countries; *Glossaries; Higher Education; Lexicography; Limited English Speaking; Pronunciation; Second Language Instruction; Second Language Learning; Teaching Methods; *Vocabulary Development; World Wide Web
IDENTIFIERS	Hong Kong

ABSTRACT

This document provides a brief overview of a PowerPoint presentation (with accompanying slides) where the development of a detailed, online subject-specific glossary is discussed. The pedagogical justification for the creation and use of a glossary is presented. It is asserted that a subject-specific glossary has many advantages and useful features, and that it will help students to access the meaning and pronunciation of unfamiliar technical terms instantly and thus reducing much of the time and effort otherwise spent in lexical research, and that this is especially beneficial for nonnative speakers of English taking English medium courses. The paper is divided into several sections with the following subheadings: "the concept"; "the development of the online glossary"; "subject specific glossary versus other electronic dictionaries"; "the technology"; "the methodology"; "lexicography." (KFT)

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A subject-specific glossary-assisted model
-- Integrated online resources for Chinese students taking degree courses in English

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A subject-specific glossary-assisted model
-- Integrated online resources for Chinese students taking degree courses in English

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The concept

The concept of *subject-specific glossary-assisted model* is derived from existing vocabulary-based learning methodologies such as that which is implemented in the Virtual Language Centre (VLC) website at the Hong Kong Polytechnic University (http://vlc.polyu.edu.hk). This methodology integrates vocabulary, lexicon, concordancing and multimedia to provide a comprehensive range of resources in support of the learner, and can be applied to create an online resource for Chinese students taking specialized subjects such as linguistics at the degree level. It also has the potential of becoming a virtual learning resource supporting a broad range of web delivery programmes such as those offered at the Open University of Hong Kong (OUHK).

The *subject-specific glossary-assisted* model is an integration of subject study with online specialist glossary and will help students to access the meaning and pronunciation of unfamiliar technical terms instantly thus eliminating or reducing much of the time and effort otherwise spent in lexical research. This is especially beneficial for non-native speakers of English taking English medium courses as is the case with many university students in Hong Kong, since it is the speed at which they can absorb the unfamiliar vocabulary will affect the quality of their study and their mastering of the course content.

The development of the online glossary

The idea of developing an online glossary using the concept of the *subject-specific glossary-assisted* model reported here comes from the experience of running one of the non-mandatory online courses[1] offered at the OUHK, namely A330 *Introduction to Semantics and Pragmatics*. This is a higher-level ten credit English medium course which examines how meaning is expressed via lexical, grammatical, metaphorical and interactional devices. The course is divided into 10 units; each focuses on a particular area of the subject. As with all other linguistics courses at the university level, in order to achieve the objectives set for each study unit and to enable the students to understand and to explain the concepts adequately, it is necessary to introduce relevant technical terms in linguistics in each unit. A specialist glossary is provided at the end of each study unit for easy reference. Below is an example taken from unit 8 of the course material:

Figure 1: Example of printed glossary

Conventional implicature	implicature attached to a particular expression
Conversational implicature	implicature attached to a particular utterance
Cooperative Principle	assumed agreement in communication
Defeasibility	context-sensitivity
Explicature	explicit specification of background information

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Hedging of maxims	avoidance of making bold statement
Implicature	pragmatic implications of an utterance
Maxims of conversation	principles governing conversation
Non-detachability	implicature remains the same in different utterances
Presupposition	presupposed information
Relevance Theory	cognitive account of pragmatic understanding

However, the glossaries printed on hard copies require the students to go through at least a portion of the list in order to identify the specific term that they are looking for, and in this sense it is comparable to using conventional dictionaries which is cumbersome to say the least.

In a course evaluation exercise conducted by the OUHK, when the students were asked about their views on how the course A330 could be improved for future presentations, we found the following response: "This course had quite a large vocabulary. Is there any way...to help us understand vocabulary easier?" (Course Evaluation Questionnaire for OUHK Courses, A330, August 2000, page 4). To use their second or third language to study a higher level English medium course at the OUHK demands that the students have not only a reasonable competence in English, but also the ability to learn new terms and absorb new concepts in that language. So, in spite of the glossary lists supplied at the end of each study unit the students still find the learning of new terminology in linguistics to be one of the difficulties they face in their study of the subject. Based on our experience of creating an online dictionary for the VLC previously, we concluded that one way of helping the students to overcome this particular learning difficulty would be to provide an online glossary.

A full time post doctoral research associate has been employed to carry out the construction of this online bilingual (English & Chinese) specialist glossary to support the Chinese students of A330 *Introduction to Semantics and Pragmatics*. We are, in the first instance, converting all the relevant course materials into an electronic database. These materials include all the study units, self-tests, sample answers to self-tests, activities, as well as the monolingual glossaries as appeared in the printed copy exemplified above. These glossaries will be made into bilingual and will contain the following items for each term:

- The terms itself (e.g. Semantics)
- Chinese equivalent
- Definition (in English)
- Comments (e.g. noun)
- Examples (these will be actual language examples taken from the concordancing corpus files)
- Synonyms (if any)

The access to any word the student wishes to know will be simply placing the cursor above the word in the text and double-clicking the mouse, and the glossary entry will be displayed instantly. This methodology will be described later.

Subject specific glossary vs. other electronic dictionaries

One of the very useful learning tools to have come about through computer technology is the electronic dictionary. Nothing is easier or faster than doing a search and retrieval from simply typing in the search string, or copy/pasting the search string from a text, compared with the often laborious and time-consuming process of finding desired information by leafing through printed books. Yet, as Greaves and Han (1999) observe, despite the power and ease of use that electronic dictionaries provide, they are still an under-used resource. One most obvious and

serious limitation on the use of the commercial dictionaries is that they are not tailored for any particular group of users. As the compilation of the online bilingual specialist glossary is based on the needs of the students taking specific courses, this resource can provide maximum help for those students, and the WWW provides us with the technology to be able to make this integration effective.

The technology

As mentioned at the beginning of this paper the concept of *subject-specific glossary-assisted model* is derived from the existing 'vocabulary-based' learning methodologies such as the one implemented in the VLC website. The VLC website is an integration of vocabulary, lexicon, concordancing and multimedia which is achieved in a unified manner, and it is this model that can be applied in creating an online resource for Chinese students pursuing degree level of studies. An important feature of this technology is that the Chinese characters sets can be either the traditional characters as used in Hong Kong and Taiwan, or the simplified characters as used in the mainland and Singapore. It is equally possible to use both. This technology has been tested with full multimedia support and WWW integration. The VLC bilingual lexicon is now recognised as a part of the worldwide WordNet projects, which was developed by the Cognitive Science Laboratory at Princeton University. The design of this on-line lexical reference system is inspired by current psycholinguistic theories of human lexical memory. English nouns, verbs, adjectives and adverbs are organized into synonym sets, each representing one underlying lexical concept.

WordNet is available for use online at its website, and it is also available for download and is free for anyone to take and use as they wish. In addition to including a desktop version of the program, the database itself is contained in 4 large text files grouped as verbs, nouns, adjectives and adverbs which can be adapted and customized to suit individual users requirements.

The VLC Net Dictionary has been developed through a combination of its original entries and by incorporating WordNet entries. The Net Dictionary now contains over 185,000 records, with entries for more than 100,000 unique English words and of which 24,500 have their Chinese translations.

Methodology

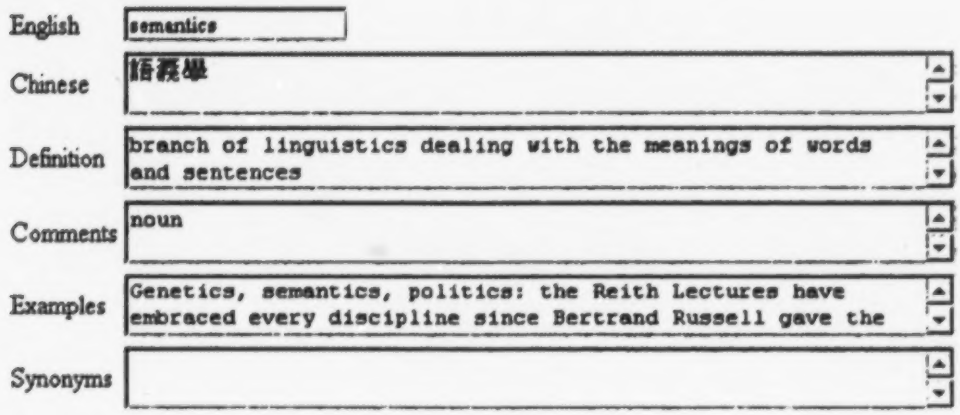
By using the strategy of text hyperlinks direct to the specialist bilingual glossary and the Net dictionary database, entries can be built up over a period of time while still making the lexicon available and fully functional in the sense of being an integral part of the learning activities, and this is thus a flexible ongoing strategy of development. Eventually, the glossary will have a sufficient number of fully edited and translated entries to serve as a general reference resource for all students taking A330. We will then go on to create subject specific lexical subsets by tagging particular items according to lexical genre.

The ability to tag entries according to genre gives us the possibility of listing many different subject specific glossaries which can directly feed into various online courses to facilitate the study of the students. Another feature which can directly benefit online courses is the ability to have links to the dictionary dynamically generated from mouse clicks without the necessity of creating specific hyperlinks for each item. This methodology will be discussed more fully in the section on Active Dictionary web pages.

Lexicography

Following the methodology developed for the VLC Net dictionary, entries may be added and edited directly using web editing forms, as shown below, which also shows the basic structure of the lexicon database. This web-based edit form contains fields for the English and Chinese equivalents, as well as fields for definition, comments and synonyms. The input method will use an HTML form to display the data entries, which can be edited and updated from any PC with internet access. Figure 2 below shows that the lexicographer is able to edit and create the glossary entries by typing into the form, and the reference sources will make use of A330 text corpora for authentic text examples. The bulk of the work is both in creating and editing the entries and in providing translations and examples from authentic sources.

Figure 2: the web-based edit form



Active Dictionary web pages

As with the VLC Net Dictionaries, *Active Dictionary* web pages will make use of programmable functions in MicroSoft Internet Explorer and Netscape browsers, and use a *point-&-click dictionary* feature that dynamically links any word in the text to the Net Dictionary. By simply placing the cursor above any word in the text and double-clicking the mouse the dictionary entry for the word will be displayed. Therefore, there is no need to create individual hyperlinks for particular words. An example of this can be seen in the VLC *Listen and learn* section which integrates ReaAudio sound files with *active dictionary* pages that link directly to the Net Dictionary. One attractive feature of this is that it enables students to hear and learn the pronunciation of unfamiliar terms in the absence of a tutor.

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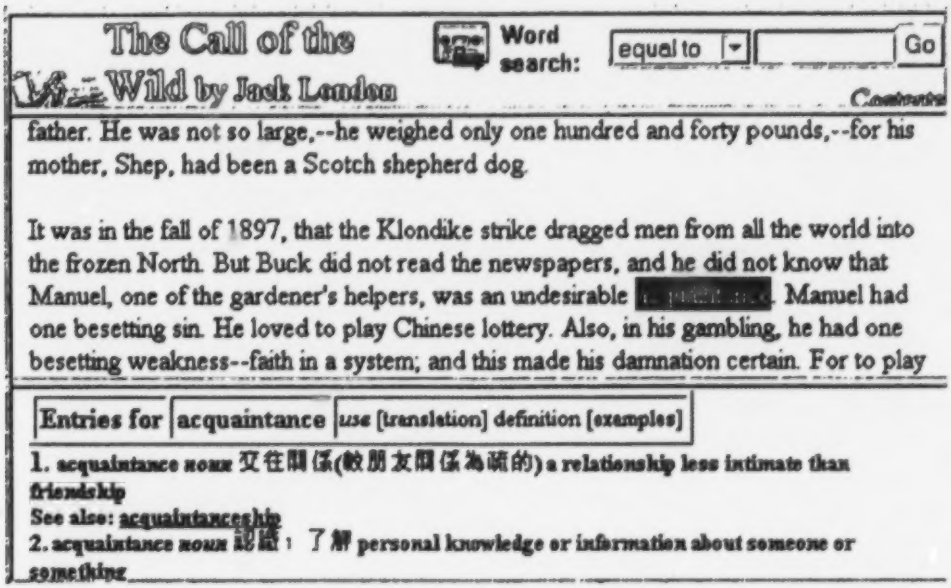
Figure 3: dictionary lookup from a literary text using the mouse double-click feature


The Call of the Wild by Jack London
Word search:
equal to
Go
Contents
father. He was not so large,--he weighed only one hundred and forty pounds,--for his mother, Shep, had been a Scotch shepherd dog.
It was in the fall of 1897, that the Klondike strike dragged men from all the world into the frozen North. But Buck did not read the newspapers, and he did not know that Manuel, one of the gardener's helpers, was an undesirable [redacted]. Manuel had one besetting sin. He loved to play Chinese lottery. Also, in his gambling, he had one besetting weakness--faith in a system; and this made his damnation certain. For to play
Entries for acquaintance use [translation] definition [examples]
1. acquaintance noun 交往關係(較朋友關係為疏的) a relationship less intimate than friendship
See also: acquaintanceship
2. acquaintance noun 認識；了解 personal knowledge or information about someone or something

As more and more institutions establish online courses and learning web sites, the integration of this kind of web based glossary/dictionary will become more widespread. *Subject-specific glossary-assisted model*, while initially developed as an effective learning resource for a specific course, is a strategy that can be integrated into a wide range of learning programmes. At the same time it can help to develop, extend and improve the Net Dictionary lexical database so that it can be the foundation of a broad learning aid distributed across the internet globally.

In the long-term *subject-specific glossary-assisted model* will then be a contribution not only in terms of what benefits our own students from having such a resource available online, but also in terms of the wider development of IT-assisted learning worldwide.

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Notes

1. There are two types of online courses at the OUHK, *mandatory* and *non-mandatory*. The former requires all students of the course to have computer and internet access. In mandatory courses the course coordinators will only post course news online and will not need to send hard copies of course materials to the students. Many science courses are mandatory online courses. If the courses do not meet these two requirements then they are non-mandatory. All courses offered at the School of Art and Social Sciences and Education are non-mandatory.

Students enrolled in non-mandatory courses will receive hardcopies of their course material via post, but they can, if they wish, access the materials that have been put online. The type and the amount being put online vary from course to course, some courses have more extensive range of materials online and some have less, and some are only limited to chat room and announcements without any teaching material online just yet.

Acknowledgements

I wish to thank the President's Advisory Committee on Research & Development, the Open University of Hong Kong for their research grant of HK$274,900.

I also wish to thank Mr. Christopher Greaves for his help and comments on this paper.

References

A330 *Introduction to Semantics and Pragmatics*
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Greaves C & Han Y (1999) A vocabulary-based language learning strategy for the internet in Debski R & M Levy (eds.) 1999

The Open University of Hong Kong *Course Evaluation Questionnaire*, A330, August 2000

The Virtual Language Centre @ http://vlc.polyu.edu.hk

WordNet website @ http://www.cogsci.princeton.edu/~wn/

WordNet Projects page @ http://www.cogsci.princeton.edu/~wn/links/

A Subject-Specific Glossary-assisted Model For Open and Distance Learning

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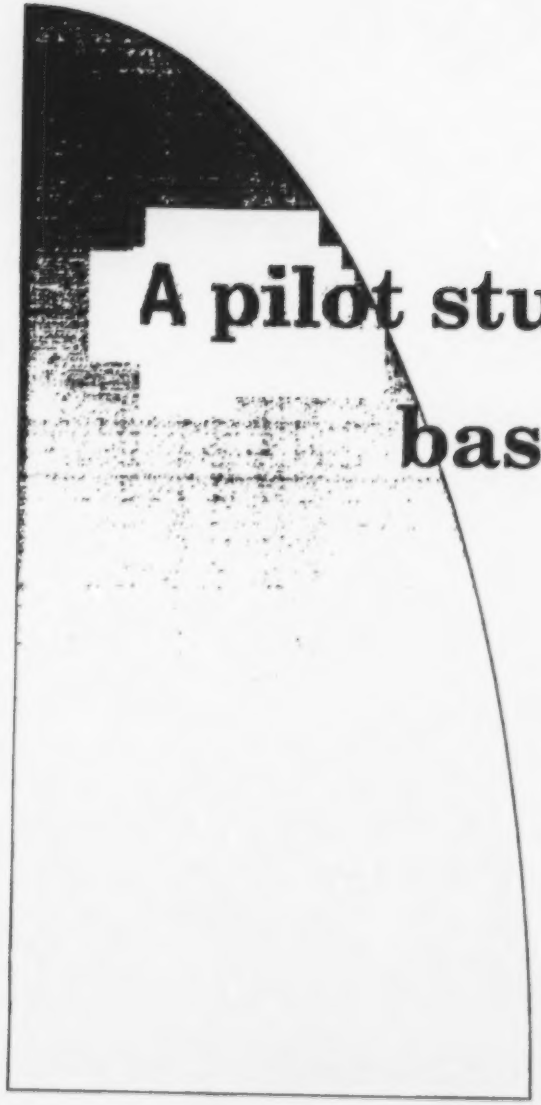
The Open University of Hong Kong



A pilot study to test the hypothesis based on the *subject-specific glossary-assisted* model

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Topics

- The concept
- The pilot study
- Online courses at the OUHK
- The technology
- Methodology
- Lexicography
- Contribution

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The Concept

- Derives from vocabulary-based learning

  vocabulary
  lexicon
  concordancing
  multimedia

- Integrates subject study with online specialist glossary
- Suits open and distance learning
- Suits independent & guided language learning

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Online Courses at the OUHK

- **Mandatory**
  - Computer & internet access
  - No hardcopies of course material
  - Science
- **Non-mandatory**
  - Optional
  - Hardcopies
  - Arts

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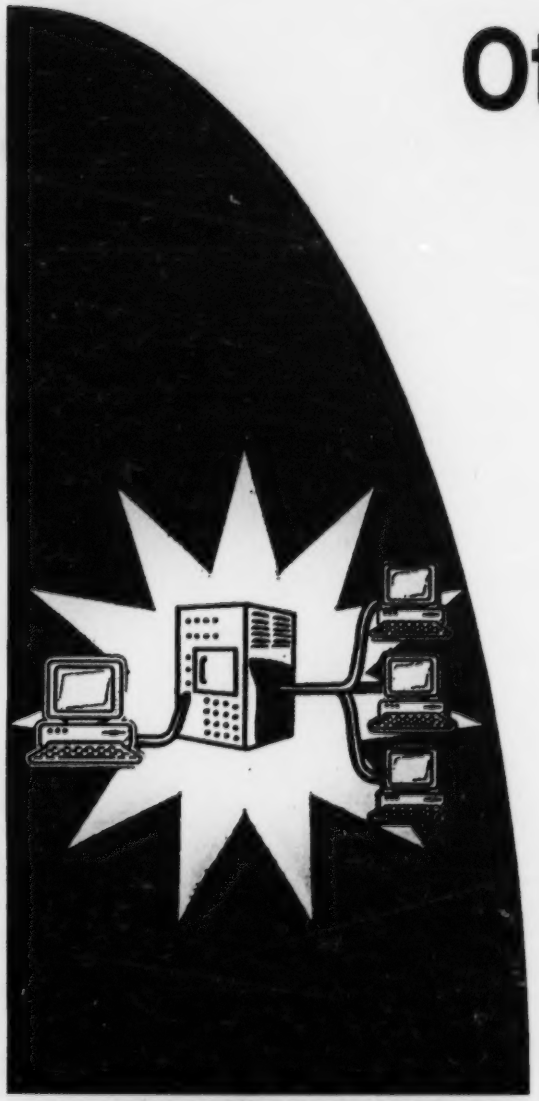

Other online activities

News
Course information
Interactive tools
Personal folder
Help
OLE Statistics (Hidden)
E-Library

The course

A330 *Introduction to Semantics and Pragmatics*

- **Non-mandatory**
- **English medium**
  - **Other English medium courses**
  - **English language courses generally**

Glossary

Cooperative Principle assumed agreement in communication

Defeasibility context-sensitivity

Explicature explicit specification of background information

Hedging of maxims avoidance of making bold statement

Implicature pragmatic implications of an utterance

Maxims of conversation principles governing conversation

non-detachability implicature remains the same in different utterances

Presupposition presupposed information

Relevance Theory cognitive account of pragmatic understanding

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What do students say?

"This course had quite a large vocabulary. Is there any way...to help us understand vocabulary easier?"

Course Evaluation Questionnaire for OUHK Courses A330, August 2000, p.4

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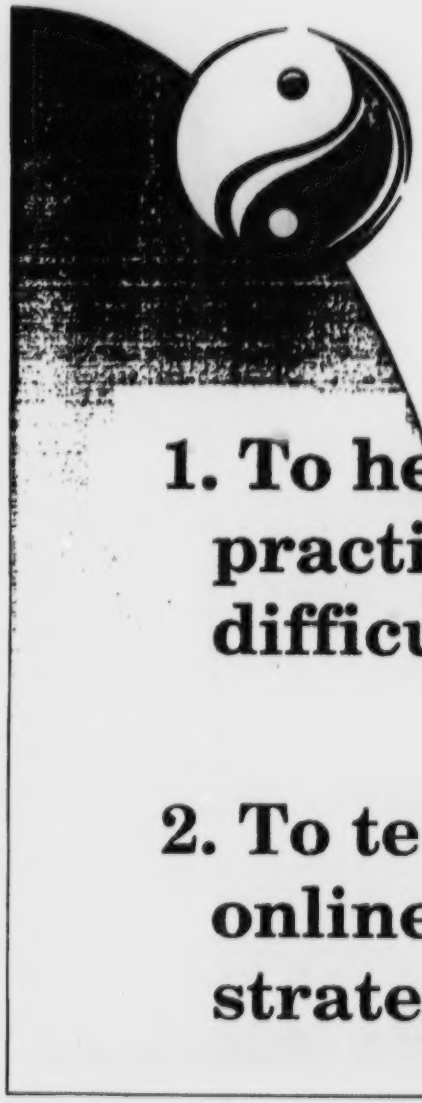

Twin Objectives

1. To help the students to overcome the practical difficulty in learning

2. To test the hypothesis of an integrated online learning strategy

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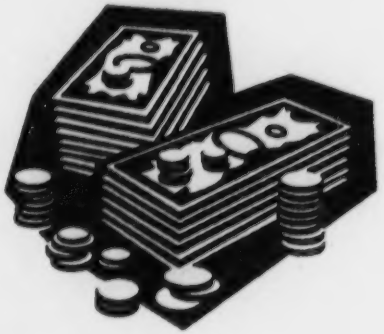
Funds

Where? President's Advisory Committee on Research & Development

How much? HK$274,900



How long? 9 months

Who? Post-doctoral Research Fellow

What? On-line bilingual lexicon

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Steps:

To put online

- All the study units
- Self-tests
- Sample answers to self-tests
- Activities
- Glossaries

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Online bilingual lexicon/glossary support for OUHK students

Bilingual specialist glossary

+ multimedia sound files

VLC bilingual online lexicon/ WordNet

+ Multimedia sound files,

Concordancing Corpus files, etc.

Non-native speakers of English taking English medium courses

✓ Reduce time

✓ Reduce effort

Speed up learning process

Technology

- 'Vocabulary-based' methodologies
- Integration of vocabulary lexicon, concordancing and multimedia
- The Chinese characters sets: traditional or simplified or both
- Current psycholinguistic theories of human lexical memory

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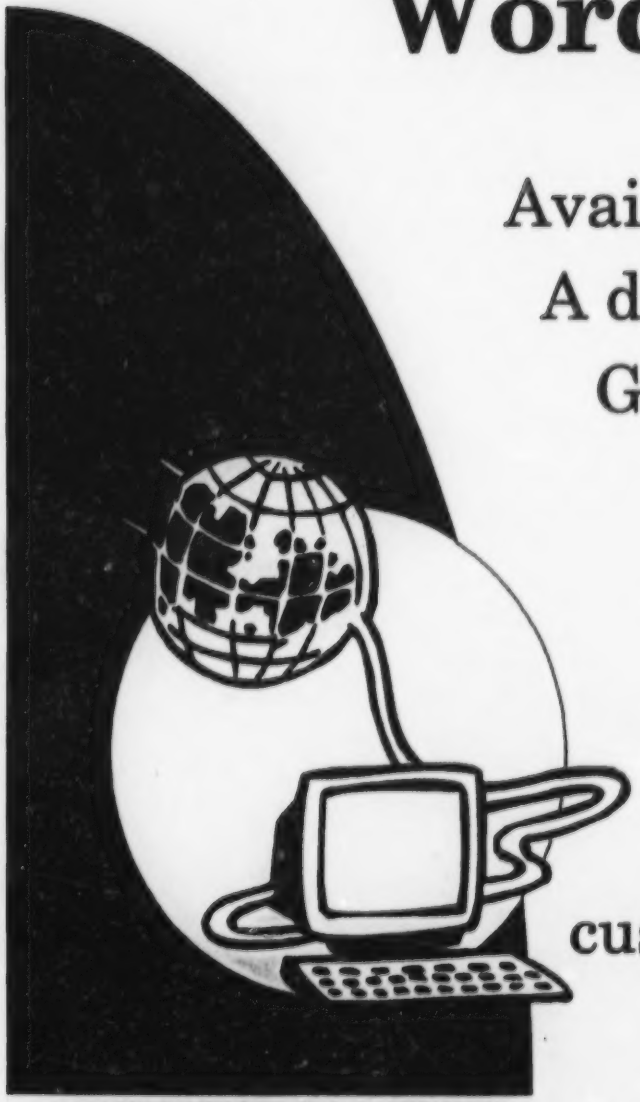
WordNet



Available online for download

A desktop version

Grouped into 4 large text files

- verbs
- nouns
- adjectives
- adverbs

Can be adapted and customized

FREE!

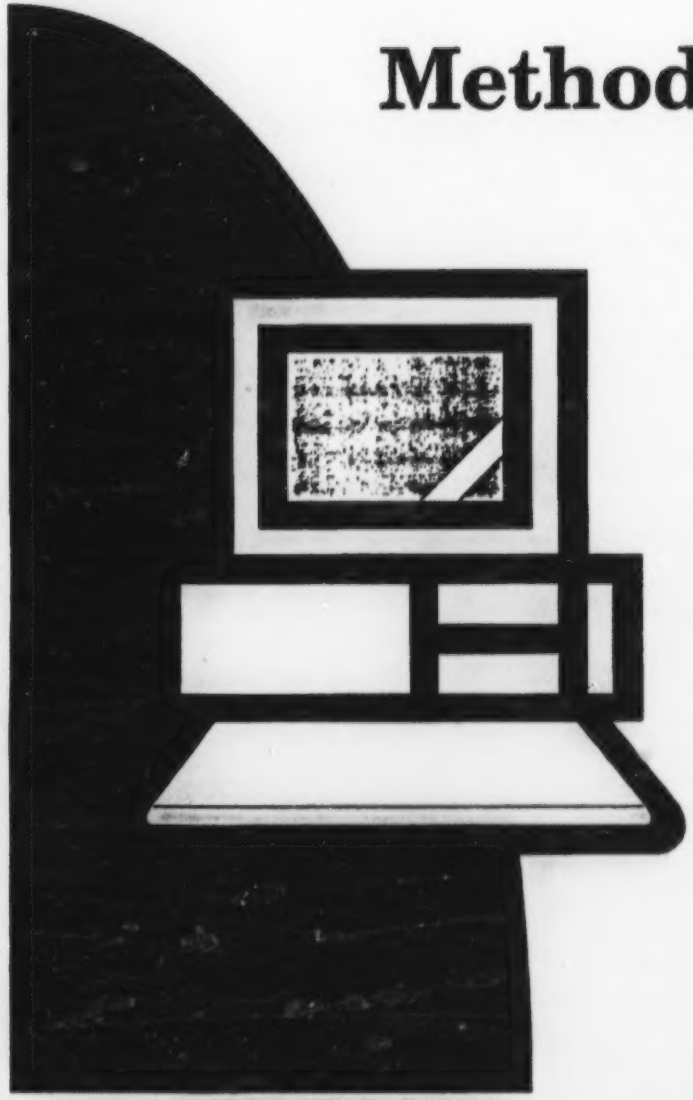
The VLC Net Dictionary

Original entries + WordNet entries

185,000 records

100,000 unique English words

24,500 words with Chinese translation



Methodology (Part I)

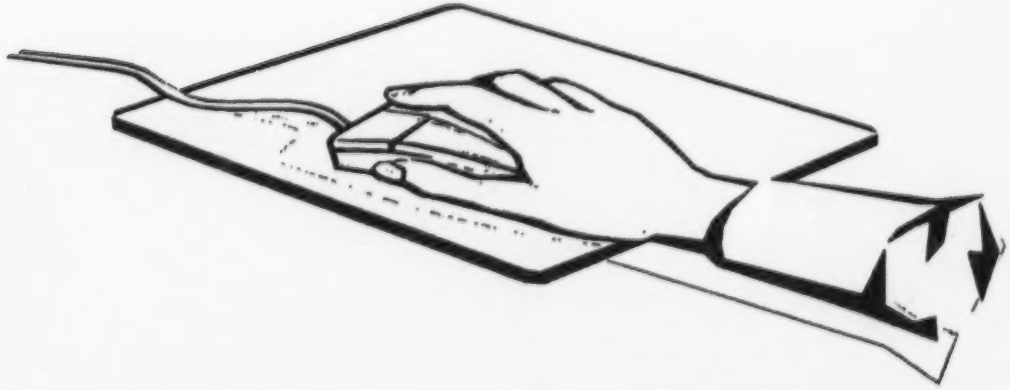
text hyperlinks

lexical subsets

other online courses

Methodology (Part II)

Links to the dictionary dynamically generated from mouse clicks



Lexicography

English
Chinese
Definition
Comments
Synonyms

The web-based edit form

English	semantics
Chinese	語義學
Definition	branch of linguistics dealing with the meanings of words and sentences
Comments	noun
Examples	Genetics, semantics, politics: the Reith Lectures have embraced every discipline since Bertrand Russell gave the
Synonyms	

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Tagging items according to genre

misanthropy - mismate
mismated - mistreated
mistreatment - Mnium
Mo - modifiable
modification - moleskin
molest - monastery
monastic - monkey bread
monkey bridge - monopolistic
monopolization - mood
moodily - morbid
morbidity - Morta
mortal - moth bean

money handler
money laundering
money market
money market deposit account
money market fund
money market instrument
money multiplier
money order
money plant
money supply
money-spinner
moneybag

ST Tag:	Biology	Botany	Zoology	Physiology	Medical	Undo Tag

Business:	Business	Banking

[Concordances for "money order"]

Dictionary lookup from a literary text

The Call of the Wild by Jack London

Word search: equal to Go

Contents

father. He was not so large,--he weighed only one hundred and forty pounds,--for his mother, Shep, had been a Scotch shepherd dog.

It was in the fall of 1897, that the Klondike strike dragged men from all the world into the frozen North. But Buck did not read the newspapers, and he did not know that Manuel, one of the gardener's helpers, was an undesirable acquaintance. Manuel had one besetting sin. He loved to play Chinese lottery. Also, in his gambling, he had one besetting weakness--faith in a system; and this made his damnation certain. For to play

Entries for **acquaintance** *use* [translation] definition [examples]

1. acquaintance ***noun*** **交往關係(較朋友關係為疏的) a relationship less intimate than friendship**
See also: acquaintanceship
2. acquaintance ***noun*** **認識；了解 personal knowledge or information about someone or something**

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Subject-specific glossary-assisted learning

an effective bilingual learners' resource for A330

strategy that can be integrated into a wide range of OUHK learning programmes

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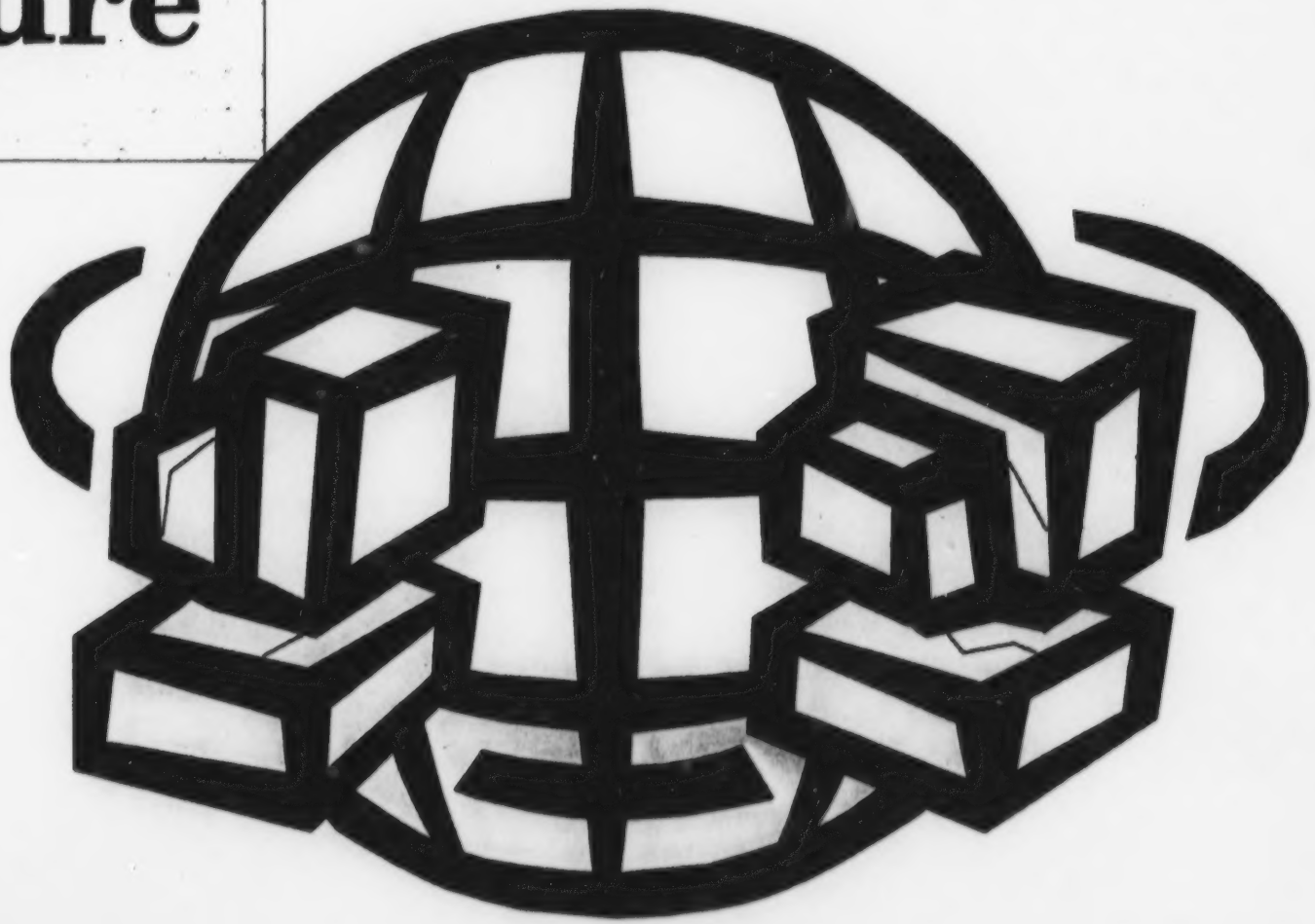
At the same time:

- Develop
- Extend
- Improve

- Net Dictionary lexical database

Future



Subject-specific glossary-assisted learning

- benefits our own OUHK students
- the wider development of computational lexicography worldwide

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Thank you

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Acknowledgements

President's Advisory Committee on Research & Development, OUHK

Mr. Christopher Greaves for his help and comments on this presentation

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The Virtual Language Centre @ http://vlc.polyu.edu.hk

WordNet website @ http://www.cogsci.princeton.edu/~wn/

WordNet Projects page @ http://www.cogsci.princeton.edu/~wn/links/

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